

# LISTINGS NEWSLETTER

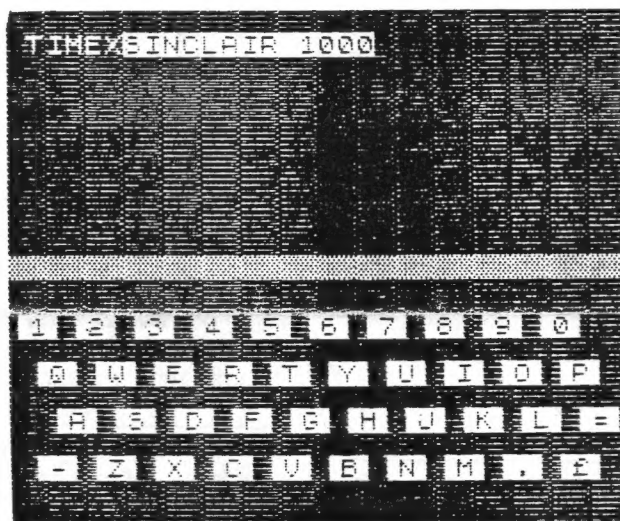
Newsletter of the  
Long Island Sinclair/Timex  
Users Group

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Incorporating NYTSE

Issue FEBRUARY 1991

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## IN THIS ISSUE

SINCLAIR RULES! By John Pazmino

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Miracle Systems Serial/Parallel Printer Interface - Bob Gilder

QLInformation.....Bob Gilder

## Deleting Blocks of Basic Statements

## LIST OFFICERS

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Please send inquiries to:

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Valley Stream, N.Y. 11581

Please send submissions to:

### LISTING

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## NYTSE

NYTSE meets the Monday after the LIST meeting at:

Miss Kims restaurant  
Park Avenue South

Between 21st St. and 22nd St.

Meetings start at 7:30 PM.

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## COMING EVENTS

March 10, 1991 LIST meeting

March 11, 1991 NYTSE meeting

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## \*\*\* EDITORIAL \*\*\*

My name is Fred Stern, and I am the Editor of this LISTing edition. Instead of having (a final word) in this issue, I am taking TOP BILLING. Since September 1988, I have been the Editor of this newsletter, and it has been a labor of love which I have enjoyed greatly. A time has come where, because of workload from my job, other obligations to my family and other Sinclair/Timex interests I must submit my resignation from this position. I am requesting that an active member come forward and volunteer his or her services to take over this position. If you are interested, please contact me at 516-737-0963 in the evening.

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## MEETING MINUTES

February 10th 1991

Harvey called the meeting to order at 3:00 PM.

All new members who have not received a

complimentary program tape please send a letter to Harvey at the above address and specify which tape you want; TS1000 or TS2068.

John Pazmino reported on a number of correspondence he has answered.

Fred Stern reported that Technical Tidbits Part II will be available for sale by the April meeting.

In June we will have a meeting/swapfest. All sellers are requested to send a list of items with prices for publication in LISTing. Please send in your list by the April meeting.

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## GOOD NEWS

Bob Gilder reports that Hugo is recuperating slowly but surely and we all send him our best.

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## PROGRAM TAPES

THE LIST TS1000 and TS2068 program tapes are ready for sale. The prices are:

\$6.00 by mail;

\$4.00 at the meetings.

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## LIST MERCHANDISE SALE

LIST has the following merchandise for sale. It is selling fast, so you better hurry;

TECHNICAL TIDBITS \$ 4.00

QL MICRODRIVE CARTRIDGES,  
set of 4 in a wallet \$15.00

TS2040 PRINTER \$15.00

TAPE RECORDER-PANASONIC \$15.00

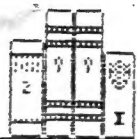
PROGRAM TAPES are recorded on quality name brand, C-60 cassette tapes.

The above merchandise can be seen and purchased at the next LIST meeting.

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## \*\*\* QL NEWS \*\*\*

Bob Gilder has developed a QL Program Library, available on 5.25" disks. The disks are priced at \$5.00 at meetings or \$7.00 by mail. For information regarding 3.5" disks and M/D cartridges, send a SASE to Bob at the following address:  
69 Jefferson Place, Massapequa, N. Y. 11758.



## FOR YOUR INFORMATION

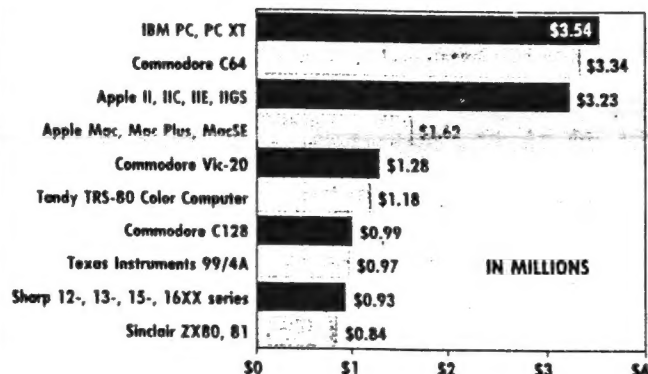
PERSONAL COMPUTING / OCTOBER 1989

### 10 Top Personal Computers Worldwide Of The Last Decade

1. Commodore C64.....	7,280,000
2. IBM PC, PC XT .....	4,577,000
3. Apple II, IIC, IIE, IIGS .....	4,487,000
4. Sharp 12XX, 13XX, 15XX, 16XX series .....	4,055,000
5. Commodore C128.....	4,003,000
6. Commodore Vic-20 .....	2,246,000
7. Apple Mac, Mac Plus, MacSE.....	2,063,000
8. Texas Instruments 99/4A .....	2,053,000
9. Sinclair ZX80, 81 .....	1,790,000
10. Tandy TRS-80 Color Computer .....	1,754,000

1978-1988 worldwide sales. Source: InfoCorp, Santa Clara, Calif.

### 10 Top U.S. Personal Computers Of The Last Decade



1978-1988 U.S. sales. Source: InfoCorp, Santa Clara, Calif..

#### AN ACCURATE COMPUTER.....

The following program was tried on the ATARI, OHIO SCIENTIFIC, PET TRS-80 MOD I, TRS-80 COLOR and the TI 99/4A:

```
10 FOR A=1 TO 100 STEP .1
20 PRINT A
30 NEXT A
```

Only the the ATARI and the TI printed the corrected list of numbers. The next program ran properly only on the TI.

```
10 PRINT "BEGIN"
20 FOR A=1 TO 0
30 PRINT A
40 NEXT A
50 PRINT "END"
```

QZX 1990 OCTOBER

### TECHNICAL TIDBITS K5XY

I have just bought a very interesting booklet from L.I.S.T., the Long Island Sound Sinclair-Timex Group. It is entitled "ZX-81 and TS1000 Technical Tidbits". I found it very interesting.

It consists of 22 single sided pages full of information appropriate to the title. It has four full page circuit diagrams and several smaller ones. It contains a short history of these machines and details of where they were built and some of the minor variations between models.

There is much other useful information. In one section there is a careful description of how to take the computer apart and put it back together safely. This information is used in the section which deals with problems related to the flexible connection between the keyboard and the main circuit board which is the usual cause of keyboard problems. Power supply problems rate a separate section including suggestions on how to get rid of excess heat. A modification to include 16 K of internal RAM is discussed. Another internal RAM section gives some of the details needed to understand RAM decoding.

The thing I missed most was some details of the difficulties many face with loading tapes. The book is silent on this widely discussed subject. Nevertheless it contains much useful information for the ZX81, TS1000, and TS1500 owner. It only costs \$4.00 and is obtainable from

L.I.S.T.  
5 Peri Lane  
Valley Stream, NY. 11581

All except the TI printed a 1 bewteen the "BEGIN" and "END" when the FOR-NEXT loop was not true.

These same two programs were tried on the ZX-81/TS 1000 and guess what. Our machine ran both and the correct responses were obtained. Not bad for a toy!

## SINCLAIR RULES! By John Pazmino

From the Mother Country (without Mother; she resigned in late November) comes the news that the SAM Coupe', the Spectrum work-more-or-less-alike from Miles Gordon Technology, is in terminal decay. According to the UK commentary the Coupe' just plain never found a proper home. It actually didn't emulate the Spectrum; it only allowed playonly access to many -- perhaps not even most -- Spectrum games. While a British house, Lerm Software, did issue SAMTAPE to effect a complete emulation via software and even expanded it into SAMTAPE-2, Sinclairs saw no advantage in the Coupe' over a stock Spectrum.

The SAM's advanced features, mainly in sound and color, suffered from the hesitant issuance of native software to exploit them. Software publishers were reluctant to carry a new, and not terribly distinct and challenging, platform on their books.

An other and good impediment against the Coupe' was the pricing. To get full use of the instrument's advanced features you had to add accessory discdrives, RGB display, and extra RAM. All this stacked the dollar outlay about as high as that for an established 68000-chip system, one that already had good software and support. In the UK the main such system is the Atari ST and, indeed, most Sinclairs on their outmove from Spectrum do settle on the Atari ST.

So, Miles Gordon are in receivership, as the British call bankruptcy, and it is an oddson bet that by the year's end the firm will shut down. MGT estimate that alltime sales of the SAM Coupe' quite equalled a myriad of units.

For the midnight fever on the Sinclair scene we look to the Venice of the North, the City of Peter, the Land of the White Night. Yes, in Leningrad the Spectrum is hale and hearty!

No!, I'm not making this up! You're thinking of that other guy Dave Barry! This is for real! Testacularly real!!

With the continuing erosion of the Iron Curtain the [former?] Soviet people are reaching out on their own to develop indigenous skills, resources, and authority. Intercompex, a new partnership of computerists, is doing this by building and selling Spectrum clones!

Called the Hobbit, with nothing to do with Tolkein but being the translitteration of some Russian acronym, it looks much like a unitized lowend IBM clone, a la Tandy or Laser or even Sinclair. The guts are inside an IBM keyboard and to it are attached up to four IBM #5-1/4 discdrives and an IBM CGA display. Across the back of the keyboard are ports for the display, discdrives, cassette ear and mic, joystick or kindred device, serial output, parallel output, and worldwide power supply.

There is no cardedge because all peripherals are connected thru the provided IBM ports directly. Hence, no stock Sinclair accessories will connect to it but almost anything else will. This seeming design flub owes to the [admittedly sporadic] availability of IBM accessories in the USSR and the essential absence of those for Sinclair and other systems.

The extensive use of IBM parts and components was dictated by sheer availability. There is a vast and virulent industry for IBM components and these sift into Russia thru the borders. There is little opportunity for importing components for other systems. In fact, I could cobble a convincing mockup of the Hobbit with the gumbo from any local computer bazaar. As we'll see later, this may be an adit into this country for the machine.

Intercompex assures that the ROM is a bonafide Spectrum ROM duly acquired from Amstrad, who now have title to it, and the Hobbit is a true Spectrum workalike. They saw the fiasco of that watch company



when it tinkered with the Spectrum in America.

Yet the Hobbit is not just a Spectrum in Big Blue clothes. It is probably what the native Spectrum would have been if Sinclair and Amstrad allowed it to evolve into the 1990s. There are several rather cunning features added in without compromising the Sinclair demeanor.

OK, it is a Russian contrivance, so it outputs in the Cyrillic character set. Ah, but, there's a toggle key that instantly flips everything to the Latin and then the Arabic set. The keyboard has 74 tegulae, from the IBM-XT layout, and 40 of these map directly into the 40 keys of the original Spectrum. One more key is the character set toggle. The remaining 33 keys are softkeys assignable by the operator to any Spectrum operations or functions. Typicly these would include the famous augmented functions mounted on the home set of 40 keys.

The discdrives are driven by code in a segregated part of RAM, not in ROM. This allows the drives to mimic any of the many Spectrum disc formats by loading an appropriate driver program. Thusly, you could load a program from (to cite familiar American formats) a Larken disc and then save it to an Aerco disc. The two discs are slotted in turn into the one and the same drive but the drive is governed by the two different driver programs. You can also load from cassette and save to disc or viceversa.

Built into the Hobbit, and paged in as desired, are Beta, a splinter version of CP/M, and a Hot-Z type of machine code processor. (The Russians know of CP/M thru utterly ediurnate litterature!) The motherboard sports an extra socket for plugin ROMs to emulate other computers. These, of course, must be customized to cope with the Hobbit's hardware and I/O. You can not just stick in an Apple II or Amstrad chip. For starts, Intercompex has chips that preserve the Spectrum soul but implement other languages: C, FORTH, LOGO, and Pascal. Which is say, with the Pascal chip installed you get the "K" prompt but the editor/parser will accept only Pascal statements.

Wow!, can you just see the lines outside Detsky Mir to buy this fabulous machine? Not quite. Lines there are plenty of in Russia these days, but they lead to pitifully barren shelves. There is no system of manufacturing, distribution, marketting, banking, servicing, and so on for home computers (or anything else). With the collapse of the old regime and the protracted interregnum there is little hope that a native home computer market will develop soon.

There is also the money situation. A standard Spectrum, smuggled into the country and sold on the black market, sells for the ruble equivalent of -- hold your bladder -- \$28,000! In Soviet terms this is TEN YEARS of the mean salary of a toiler or peasant!! Yet, in a land where unsupervised thoughts landed you in deep prison, the lure of a gadget that thinks for itself is just too much.

So Intercompex is aiming at the schools. Schools in Leningrad, like those in New York, work out ways to pay for stuff they covet. The enterprise loads some units into a kited van and shabashniks around town and in the suburbs. So far, in their first year of operations, they sold about 15,000 units. Please bear in mind that when Gorbachev ascended the throne in 1985 he vowed to place in the Soviet schools one million computers by the end of this century. As he spoke those words there were in all the schools of all the Russias just two computers.

But why clone the Sinclair Spectrum? It is simply the computer of the realm in Russia. Besides the black market real McCoys there are untold thousands of kitchentable homemade clones of them. The colloquial Russian word for "computer fan" or "computerist" is, no kidding, "sinclairski". The IBM is fast coming along, however, it is concentrated in labs, universities, and institutes and not in homes.

How did the Spectrum achieve such a stature? Well, look at the

Is, then, the Hobbit fated to forever range along the Neva River? Emissaries of Intercompex think not. They are fanning out into Europe and Third World countries to explore export prospects. They can do this self-initiated dealing thanks to the dissipation of command, control, and coercion throughout the Soviet Union. I myself find their expectations too idealist and naive. By the same token, the Leningrad lads are today saying stuff that a scant two years ago would have earned them lots of sunbathing in Oymyakon. I would observe that, with the general rise in economies and lifestyle in the Third World, it is still a long while before the rank and file citizen will have the casual discretion to get a home computer.

Ah, now, is there a prospect for the Soviet Spectrum in America? Here the Spectrum had a brief and intense blaze in the early 1980s. Whence sprang LIST, other Sinclair clubs, and a Sinclair industry. The commercial sector is now about vanished but the clubs remain. Alas, the whole sum of all Sinclairs in the States probably does not exceed one myriad. This is far from the critical mass required to sustain a revived Sinclair industry in the States.

In as much as virtually all American computerists have an IBM rig or can get one trivially for under a thousand dollars, Americans already have all the hardware components of the Hobbit. The remaining bits, the motherboard and circuitry, could be built as a card to slot into an up-&-running IBM. Voila'!, mens Sinclair in corpore IBM! This card will have the cassette and joystick ports, being that these are wanting on the ordinary IBM chassis. Boot software will come on either a DOS disc or a Sinclair cassette. Then by a DOS statement like "SET CPU=HOBBIT" you get the Sinclair welcome banner.

୧ ୨ ୩ ୪ ୫ ୬ ୭ ୮ ୯ ୧୦ ୧୧ ୧୨ ୧୩ ୧୪ ୧୫ ୧୬ ୧୭ ୧୮ ୧୯ ୨୦ ୨୧ ୨୨ ୨୩ ୨୪ ୨୫





# TECH TALK

TECHNICAL TALK - NOTES - DIAGRAMS - DATA - SUGGESTIONS - INFORMATION...

## Miracle Systems Serial/Parallel Printer Interface - Bob Gilder

The following subject matter for this article was prompted by a member of LIST who had ordered a Serial/Parallel Printer Interface from SHARP's and it took 6 months before he had received it! Plus several QL hardware manufacturers in the U.K. have given up support as stated in a recent issue of Sinclair QL World magazine. By no means is this to be considered a construction article as this circuit is probably protected by copyright. It is for information purposes only in the event that YOUR S/P Printer Interface goes bad and you want to repair it yourself. This is the reason that I wanted to examine the subject hardware, so that I could trouble-shoot and repair it if need be.

I started by drawing the printed circuit layout on one side of a piece of paper and then on the other side I drew out the parts placement directly over the PC traces. The schematic drawing was completed after two prototypes were built and working. My hat is off to the individual who originally designed the PC layout for this interface as it is quite complicated with many traces interwinding between the IC pins. This made the job of tracing the circuit difficult. To insure that duplication of the circuit board was correct, I de-soldered every component on the PC board and then made corrections to the drawings.

I prototyped two units. The first one was built on a Radio Shack IC prototype board, approximately measuring 4 x 5 inches. The second unit was half the size of number one. All IC's were socketed (it was a good idea), in the event the unit didn't work...and it didn't work! When I fired up the first unit built, printing did occur, however, the characters printed were not the same characters from my test document.

I realized that this was a timing problem which was directly related to the CMOS 555 timer IC's used in the circuit. I purchased several different CMOS 555 timer types and found that the LMC555CN timers cured my problem. If you need to replace these devices in your interface, try to get the exact replacement of what you have and if you can't locate them, purchase the LMC555CN timers from the source listed below. I tried Radio Shack's TLC555's and found that adjustment of the timing controls were too critical and they are slightly higher in price compared to the LMC555CN timers.

There are two variable controls which require adjustment. I didn't take any measurements as far as resistance or voltage; I adjusted the controls a little at a time until the printer responded printing correctly. The 47K (can be 50K) control I adjusted to the full clock-wise position (this was due to using a 220K resistor instead of a 240K resistor as the circuit called for). The 4.7K (can be 5K) control was adjusted to approximately an 11 O' clock position.

The second unit built also gave me timing problems. That was because the timing capacitors used were well out of tolerance required for the circuit to perform as it should. They were replaced with two capacitors that I checked out on a capacitor meter and prototype unit two operated fine. The range for the capacitors used for timing should be between .0030mf to .0036mf. The capacitors installed in the Miracle unit were 1% polystyrene types.

Insure that if you have to replace either the 74HC02 IC or the 74HC164 IC that they are exact replacements. These IC's are low power CMOS devices which draw their operating power from the QL's Serial Port. These IC's can



also be purchased from the supplier indicated below.

All the resistors are standard 5% 1/4W with the exception of the 240K resistor which is only obtainable as a 1%, 1/4W. A 220K and a 20K resistor can be placed in series to obtain an approximate 240K value or if you have an OHM Meter you will find that in a batch of 220K resistors some will be on the high side of the indicated value on the resistor. Use it and make up the difference with the adjustment of the 47K control.

The .01mf capacitors can be ceramic disc types. The 33mf electrolytic capacitor can have a value up to 100mf and the .0033mf capacitors should be close tolerance units as described earlier in the text.

One final note: If your printer does not respond when required, it may not be the Serial/Parallel I/F. On several occasions my

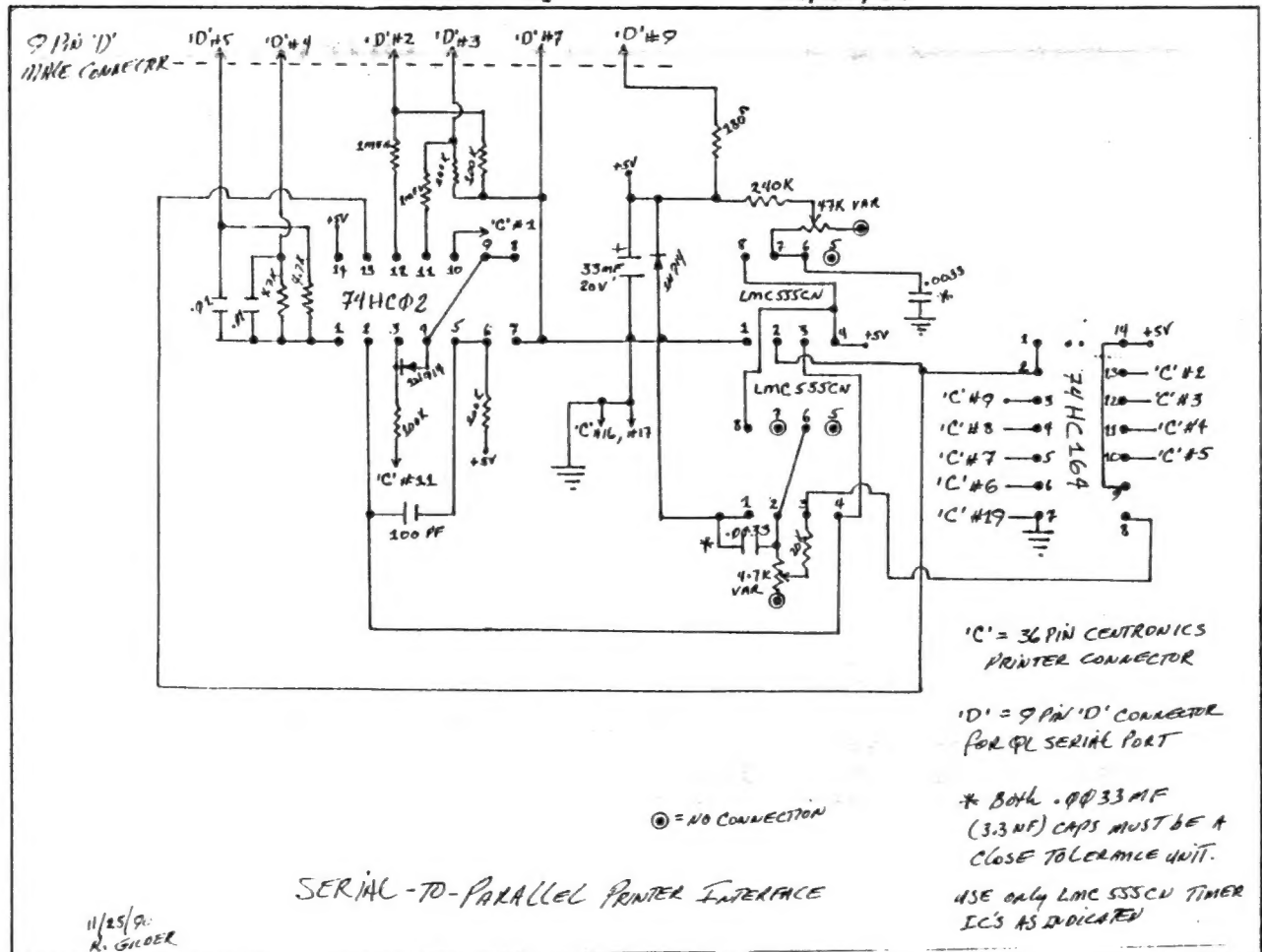
printer would not print from a QL. The first thing I do is hook up my spare QL and try printing. Each time the printer responded as it should with the printer interface connected to SER1 or SER2. Now I knew that the 1488 IC was blown & most likely the -12 volt regulator was also no good. The 1488 requires +12 volts and -12 volts for operation. In each case both IC's had to be replaced....and in each case it was my fault! I do a lot of experimenting with various interfaces and at times, I become careless.

If you have difficulty repairing your Serial/Parallel Printer Interface you can drop me a line in care of LIST and I will promptly reply with help.

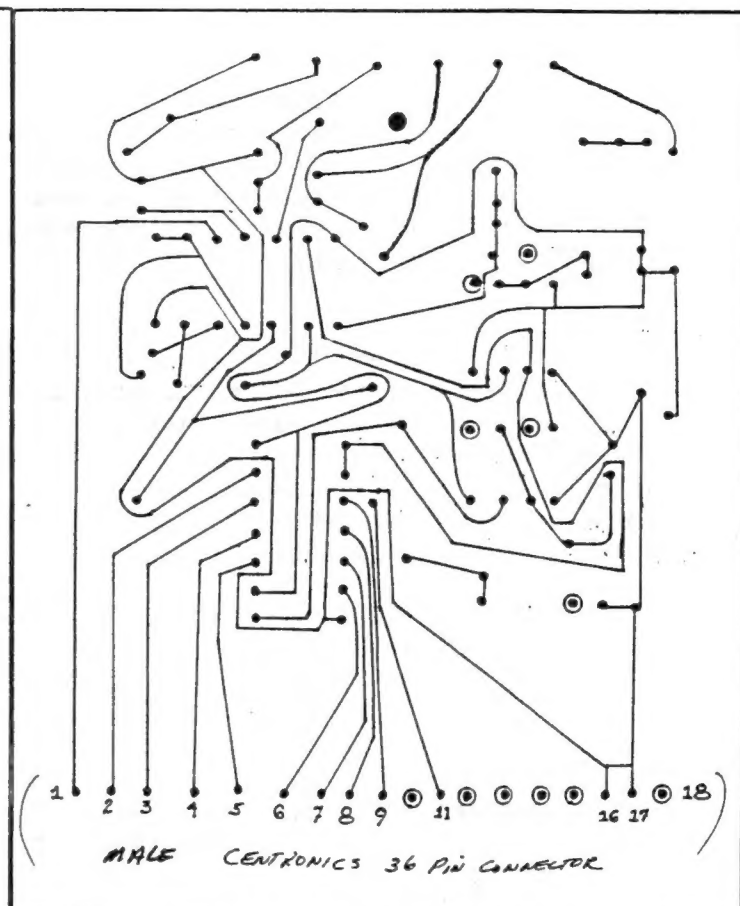
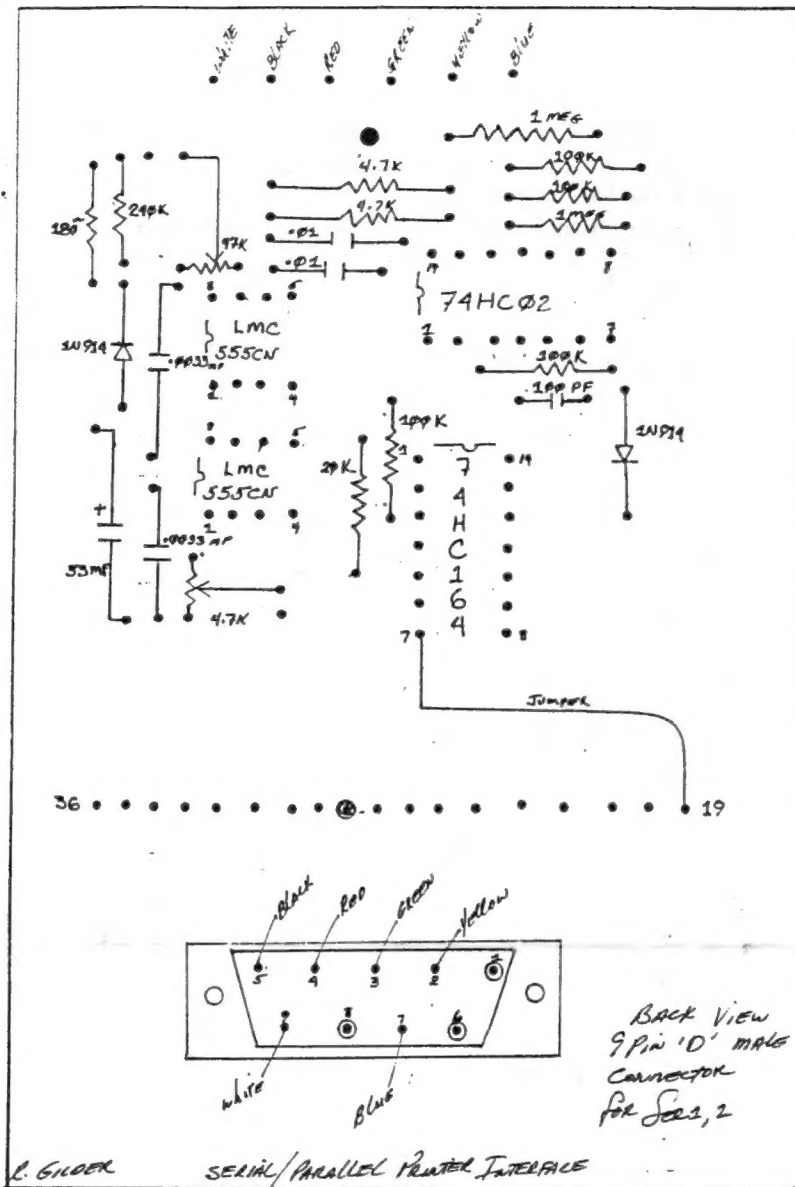
\*\*\*\*\*

KRP Electronic Supermarket, Inc.,  
219 W. Sunrise HWY, Freeport, NY 11520. Telephone Number 516-623-3343. They have a supply of all the IC's used in this circuit and prices are not high.

- 11/30/90 -







## OOPS!

Thanks to LIST member DR. Raymond Kaufman who located two errors in the Metric\_con program listing in last months LIST Newsletter. Please correct formulas in lines 920 and 990.

920 CLS:c=b:c=c\*6.10238E-2 etc.  
990 CLS:c=b:c=c\*16.38716 etc.

Bob Gilder

### PROGRAM SECTION HEADINGS

Perhaps it is no exaggeration to say that the majority of computer programs are now comprised of several parts. A typical program may have a prominent copyright sign; followed by a full-screen caption display; followed by the loading of a new character set or graphic symbols; followed by a machine-code utility or operating system; followed by a BASIC section.

The annoying feature of all of these, for those of us still struggling with cassette recorders rather than with the absolutely brilliant Microdrive, is to see the ugly "Program:" or "Bytes:" or "Number Array:" or whatever, prominently displaying itself at the most vulnerable part of whatever screen display is visible at the time. There is absolutely no need to have to put up with such an inartistic display since it is extremely easy to eradicate!

Using the hypothetical example in the first paragraph, one would need in addition a small loader leader, such as:—

```
10 PAPER: INK7
15 PRINT AT 20,0;
20 load "copyright" SCREEN$
25 PAPER: INK1
30 PRINT AT 20,0;
35 LOAD "caption" SCREEN$
40 PAPER: INK1
45 PRINT AT 20,0;
50 LOAD "chars" CODE
55 PAPER: INK1
60 PRINT AT 20,0;
65 LOAD:—
```

In this example, I have assumed that the "copyright" screen would have a blue (colour 1) background and that there would be no actual design at line 20. Similarly, to maintain a colour harmony, I have assumed that the "caption" (which would, of course, be on display throughout the loading of the main bulk of the program) would also have a blue background and would have a free line at line 20.

This short loader would be saved as: SAVE "name of main program" LINE 10. As soon as it has been saved, leave the tape at this position; SAVE "copyright" SCREEN\$ and leave the tape at this position; prepare and SAVE "caption" etc. etc. When saving the main basic element of the program, SAVE it using line 1, or which ever makes it autorun.

This loader program should be easy to adapt to your own needs. The criteria are that you are printing the heading to each part of the program where you want it; also, you are having it printed in the ink and paper colour of the particular line you have chosen so that it is invisible!

So let's have some more professional-looking program presentation until we are all using the Microdrive!

## EPROM CONCEPTS

The QL memory map contains several areas which can be used for expansion hardware and/or EPROMS. The ROM expansion port uses the 16 kilobyte slots from address \$C000 to \$FFFF. Another 16 slots are available between addresses \$C0000 to \$FFFFF.

A ROM slot, located at the rear of the QL, allows users to place additional ROMs on-line as if they were part of the native operating system. ICE, SuperToolkit II, Speedscreen and CPMulator and other EPROM based programs normally occupy this slot.

Each time the QL is reset, it checks for ROM drivers. The availability of add-on ROMs is identified by the long-word flag 4AFB0001. If the flag is set the QL will link in the additional procedures from the ROM to the QL operating system. These programs are usually initialized by keywords ( TK2\_ext for SuperToolkit II and ICE for ICE).

Contents on EPROM can be copied to disk or microdrive cartridge after the EPROM cartridge is inserted in the rear slot and after pressing 'F1' or 'F2', type SBYTES flp1\_(or mdv1\_)filename, 49152,16384. Of course, you cannot run these programs from disk or microdrive unless they are reformatted by a special program as on 'Locksmith & 4matter'. However, if you have an EPROM programmer, they can be duplicated on EPROM using this method.

EPROMs currently used within the QL are 27128 (16k), 27256 (32k) and 27512 (64k) and are manufactured in either NMOS or CMOS, the latter being preferential as they are low power devices.

Any one doing serious work with EPROMs will almost inevitably acquire an EPROM programmer. Even if you had no previous experience with a programmer, you will find the QEP III exceptionally easy to use. Every attention has been paid to the smallest detail with regard to both presentation and function. The QEP III occupies the QL expansion port and remains resident until it is invoked with the command 'EPROM' or 'EPROM size', where size is the working area used by QEP III.

This versatile and flexible programmer is suitable for the complete range of 5-volt NMOS and CMOS EPROMS from 2716/2516 types to 27512 type. Three programming voltages are provided - 12.7, 21 or 25 volts.

A 28 pin 'ZIF' (zero insertion force) socket accommodates an EPROM- either a programmed chip, which is to be copied into the QL memory or a new chip ready to be programmed.

There are many other features available on the QEP III programmer which would only be of interest to any one interested in EPROM programming. I did read in one UK publication that in Europe, the QL was being purchased with the QEP III by some individuals, to be used exclusively as an EPROM Programming and/or Duplicating machine.

Several programs are available to convert SuperBASIC programs to a ROM resident file so that it can be copied to an EPROM. RPM is one such program, developed by Liberation Software, UK. The other program available is titled Things and Eprom Manager II by Jochen Merz Software, West Germany.

Both programs provide a means by which a ROM header is developed with the flag \$4AFB0001 and an initialization pointer for your basic programs. I have RPM and have not been able to master it as yet. Perhaps some day.....

There is another important item necessary when programming EPROMs; it is an EPROM eraser when things go wrong, perhaps the program won't initialize or possibly some additional programming may be desired. An EPROM eraser uses UV (Ultra Violet) light as the source for cleaning out the burned-in program. The eraser I use is the DATARASE, which has the capability of erasing two eproms simultaneously within two-to-three minutes. The manufacturer of this product claims that most EPROMs can be erased approximately 500 times before an EPROM is permanently damaged with their eraser.

Next month I will discuss methods for using more than one EPROM on the QL.

# Deleting Blocks of Basic Statements

Don Kraska



On several occasions, I have had to delete a large block of Basic program statements from an existing program. For example, I developed a loader program to process "pseudo machine code" into actual absolute address machine language code. The loader is written in Basic and is several hundred statements in length. After the machine language code is debugged and running properly, I only want to retain the REM statements containing the machine code, not the loader. Deleting the loader program one line at a time is a tedious, time consuming process. I decided there had to be a better way.

Closer inspection of the chapter on system variables in the manual, uncovered the word NXTLIN at address 16425. The definition is:

SX2 16425 NXTLIN Address of next program line to be executed.

Don Kraska, 2101 Ledge Rd., Hinckley, OH 44233.

Suppose I put some statements just before the first line I wanted to delete, and some other statements just after the last line I wanted to delete. I should be able to calculate

the total length of all the lines in between. Then I could POKE this length into a REM statement at the beginning of the block. The REM statement would then include all the statements I wished to delete. Deletion of the REM statement would delete the entire length. I thought this would work, since I had learned through experimentation that statement deletions are based on length only, not the ending ENTER character.

It does work. Figure 1 shows sample coding to delete lines 200 through 5000. The statements with line numbers which are not multiples of 10 are the statements necessary to perform the deletion. After adding the necessary statements, type in: GOTO 5001 and hit ENTER. You will stop with 9/199. Now delete lines 191, 192 and 5002. Lines 200-5000 will be deleted and also all the coding used to delete them.

Figure 1. Sample Deleting Lines 200-5000.

```

10
190 (10-190 ARE LINES
191 TO BE KEPT)
192
6425+3 LET S=PEEK 16425+256*PEEK 1
193 REM
194 LET L=E-S-1
195 POKE S,INT (L/256)
196 POKE S-1,L-256*PEEK S
200 STOP
2000 (200-5000 ARE LINES
2001 TO DELETE)
5000
50001 LET E=PEEK 16425+256*PEEK 1
5002 GOTO 191
5010 (5010-9990 ARE LINES
9990 TO BE KEPT)

```

LKDOS loader for LARKEN Disk system. Will load your programs and files from list printed on screen by simply moving the cursor over the one you want to load. No typing in names and extensions anymore. A great help to LARKEN users. PRICE \$5.00. Order from Tom Skapinski, 7 Afkinson LN, Coram NY 11727.. CANADA orders \$5.75 includes S/H.

**SHOOT**

SHOOT is the official newsletter of the Seattle Area Timex Users Group. It is published monthly, with mailings due before the 1st Thursday of the month.

New Jersey Man Shoots Computer By Anonymous, ACGNJ

A man named Micheal A. Case was arrested at home after firing eight bullets from his .44-caliber revolver into his IBM personal home computer. These were not just any bullets, either, these were your hollow point "dum-dum" bullets, which as you sportsman know, give you the kind of "stopping power" you need when your up against a product backed by the world's leading manufacturer of data-processing equipment. Lt. Donald Van Tassel of the Passaic Township police told me that Mr. Case was not very specific about his motive. He said he just got mad at his computer and opened up on it. I want to state, that we are behind him one million percent. If we have reached the point in this country where a man does not have the right to bear arms against his own computer, then we might just as well pour new Improved Liquid Drains on the U.S. Constitution.

-----PC NEWS & REVIEWS Oct 1989

Guilt trip of the 1990s  
You don't call me, you don't write me, you don't fax me.  
-----Seattle P.I. April 2, 1990

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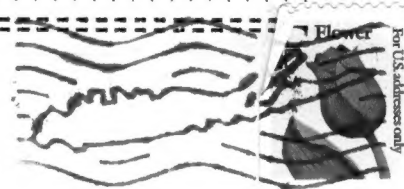
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